Name:_____ HW99 Similar Triangles & Ratios

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Geometry, Period_____

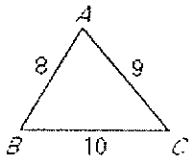
Due Date: Wed. 11 Feb 2015

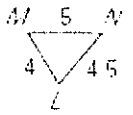
Form A

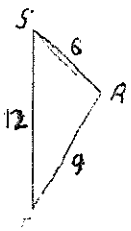
Geometry Homework

Failure to show all work and write in complete sentences will result in LaSalle.

1) Is either ΔLMN or ΔRST similar to ΔABC?
Write a similarity statement ($\Delta\_\_\_ \sim \Delta\_\_\_$) & explain how you know (use the word "ratio" in your answer)

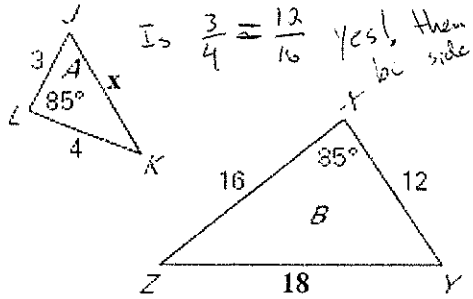






Directions: Determine whether the two triangles are similar.

2) Similar? Yes Why/why not?



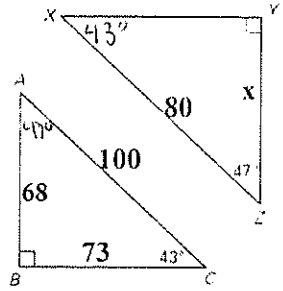
Is $\frac{3}{4} = \frac{12}{16}$ Yes! Then they are similar because ratios are equal side

Similarity statement:

$\Delta JLK \sim \Delta YXZ$

Find x (if possible)

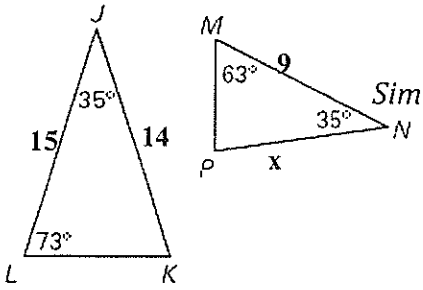
3. Similar? _____ Why?



Similarity statement:

Find x (if possible)

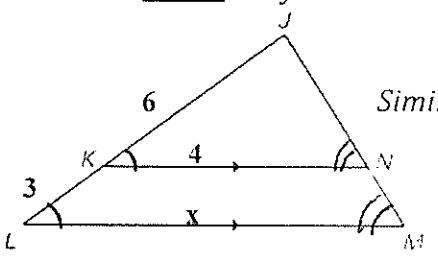
4. Similar? _____ Why?



Similarity statement:

Find x (if possible)

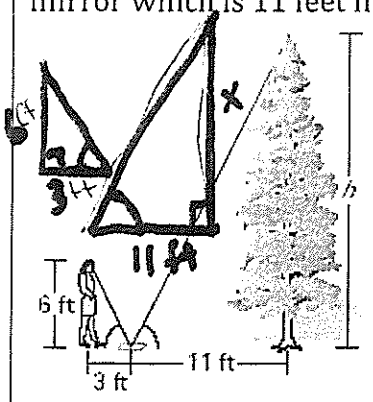
5. Similar? _____ Why?



Similarity statement:

Find x (if possible)

6) In order to estimate the height *h* of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree.



a. What is the height *h* (in feet) of the pine tree?

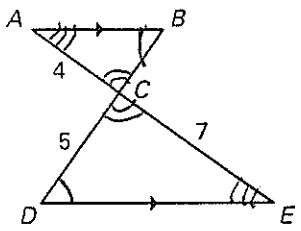
Another student also wants to see the top of the tree. The other student is 5.5 feet tall. If the mirror is to remain 3 feet from the student's feet, how far from the base of the tree should the mirror be placed?

7. (Show your work... always!)

Multiple Choice In the diagram at the right, find the length of $\overline{BC}$.

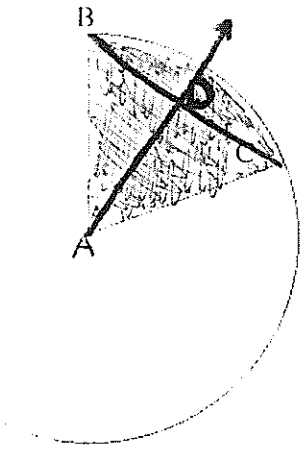
A. $\frac{28}{5}$ **B.** 6

C. 3 **D.** $\frac{20}{7}$



Other Review for the THURSDAY TEST!

(Test includes Pythagorean theorem, distance formula, triangle types, congruent triangles, ratios & similar triangles)



1) What is the area of the circle if r =12?

2) If m∠A = 60°, what ratio expresses the size of ∠A in relation to the number of degrees in the entire circle?

$\frac{60}{360} =$

3) Using this ratio, what is the area of the shaded portion?

4) If you drew ~~a line con~~necting points B & C, what type of triangle would this create?

Equilateral because A equals 60° and $\overline{BA} \cong \overline{BC}$ because they are both ra

5) What is the length of $\overline{BC}$? So that means the angles created need to be equal and $\frac{180-60}{2} = 60$

6) Draw a ray that bisects angle A. Label points D where this ray intersects BC. How long are BD and DC?

$\overline{BD} = 6$ $\overline{BC} = 6$

7) What kind of triangle is ΔABD?_____ label the parts of the triangle a, b, and c.

8) What is the length of $\overline{AD}$ (in simplified radical form AND decimal form)

9) What rule would demonstrate that ΔABD ≅ ΔACD?_____(be sure to mark this info on the triangles)

10) What is the area of ΔABC?